

WHAT IS CLAIMED IS:

1. An image pickup device having a solid state image sensor for converting an optical image to electric signals that operates under an image shift mode and a normal mode, said image shift mode is a high resolution mode in which pixels in said solid state image sensor are interpolated in order to increase a resolution, and said normal operation mode is lower in resolution than said image shift mode, said image pickup device comprising:

one or a pair of optical low pass filter that being rotatably placed in a vertical plane that being vertical to an optical axis; and

a rotary mechanism for rotating said optical low pass filter in said vertical plane that is vertical to said optical axis,

wherein said rotary mechanism rotates said optical low pass filter in order to change an angle of said optical low pass filter in said normal mode and said image shift mode.

2. An image pickup device having a solid state image sensor for converting an optical image to electric signals that operates under an image shift mode and a normal mode, said image shift mode is a high resolution mode in which pixels in said solid state image sensor are interpolated in order to increase a resolution, and said normal operation mode is lower in resolution than said image shift mode, said image pickup device comprising:

a first optical low pass filter that being fixed in a vertical plane that being vertical to an optical axis;

a second optical low pass filter that being rotatably placed in said vertical plane that being vertical to said optical

axis; and

a rotary mechanism for rotating said second optical low pass filter in said vertical plane that is vertical to said optical axis,

5 wherein said rotary mechanism rotates said second optical low pass filter in order to change an angle of said second optical low pass filter in said normal mode and said image shift mode.

3. An image pickup device according to claim 2, wherein
10 during said normal mode, a separation direction of a light from said first optical low pass filter is the same as that from said second optical low pass filter, and

during said image shift mode, said separation direction of said light from said first optical low pass filter is a desired
15 angle to said separation direction of a light from said second optical low pass filter in order to set these separation directions of said first and second optical low pass filters in two directions.

20 4. An image pickup device having a solid state image sensor for converting an optical image to electric signals that operates under an image shift mode and a normal mode, said image shift mode is a high resolution mode in which pixels in said solid state image sensor are interpolated in order to increase a
25 resolution, and said normal operation mode is lower in resolution than said image shift mode, said image pickup device comprising:

first and second optical low pass filters that being fixed in a vertical plane that being vertical to an optical axis;

a third optical low pass filter that being rotatably placed
30 in said vertical plane that being vertical to said optical axis;

and

a rotary mechanism for rotating said third optical low pass filter in said vertical plane that is vertical to said optical axis,

5 wherein said rotary mechanism rotates said third optical low pass filter in order to change an angle of said third optical low pass filter in said normal mode and said image shift mode.

00673897 121900
10 5. An image pickup device according to claim 1, wherein when said normal mode is switched to said image shift mode, a change mount of a rotation angle or a separation width of a light form said optical low pass filter rotated by said rotary mechanism is optimally determined based on at least one of or a combination of a characteristic of an image pickup optical mechanism, a characteristic of a color filter, a characteristic of a signal processing circuit system including a CCD.

20 6. An image pickup device according to claim 2, wherein when said normal mode is switched to said image shift mode, a change mount of a rotation angle or a separation width of a light form said second optical low pass filter rotated by said rotary mechanism is optimally determined based on at least one of or a combination of a characteristic of an image pickup optical mechanism, a characteristic of a color filter, a characteristic of a signal processing circuit system including a CCD.

30 7. An image pickup device according to claim 3, wherein when said normal mode is switched to said image shift mode, a change mount of a rotation angle or a separation width of a light form said second optical low pass filter rotated by said

rotary mechanism is optimally determined based on at lease one of or a combination of a characteristic of an image pickup optical mechanism, a characteristic of a color filter, a characteristic of a signal processing circuit system including a CCD.

5

8. An image pickup device according to claim 4, wherein when said normal mode is switched to said image shift mode, a change mount of a rotation angle or a separation width of a light form said third optical low pass filter rotated by said rotary mechanism is optimally determined based on at lease one of or a combination of a characteristic of an image pickup optical mechanism, a characteristic of a color filter, a characteristic of a signal processing circuit system including a CCD.

10

15

09738977-121900